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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/728,599

12/04/2003

Yong Yang

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KRAMER LEVIN NAFTALIS & FRANKEL LLP
INTELLECTUAL PROPERTY DEPARTMENT
1177 AVENUE OF THE AMERICAS
NEW YORK, NY 10036

EXAMINER

RONESI, VICKEY M

ART UNIT

PAPER NUMBER

1714

MAIL DATE

DELIVERY MODE

08/28/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/728,599	YANG ET AL.	
	Examiner	Art Unit	
	Vickey Ronesi	1714	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 04 June 2007.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 58-77 and 102-104 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 58-77 and 102-104 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|--|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)
2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>6/4/07, 6/1/07</u> . | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
5) <input type="checkbox"/> Notice of Informal Patent Application
6) <input type="checkbox"/> Other: _____ |
|---|--|

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 4/26/2007 has been entered.
2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior office action.

Claim Objections

3. Claims 68 and 103 are objected to because of the following reasons:

With respect to claim 68, line 7, the term "monomer" should be recited after "surfactant" because it is the surfactant monomer which is being described.

With respect to claim 103, line 3, "akly" is misspelled and should read as "alkyl".

Appropriate correction is required.

Claim Rejections - 35 USC § 103

4. Claims 58-65, 68-74, and 102-104 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chang et al (US 4,421,902, cited on IDS dated 12/4/2003).

With respect to claims 58-65 and 68-74, the rejection is adequately set forth in paragraph 4 of Office action mailed on 12/27/2006 and is incorporated here by reference.

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With respect to new claim 102, Chang et al teaches the use of "at least one" surfactant monomer (col. 5, lines 22), which suggests the use of mixtures.

With respect to new claim 103, Chang et al discloses a hydrophobic moiety that is an alkyl, alkyl-aryl, or polycyclic alkyl group having 8 to 30 carbon atoms (col. 4, lines 62-64).

With respect to new claim 104, the ethyleneoxide moiety has 2-60+ units (col. 4, lines 67-68).

5. Claims 60, 65-67, 69, and 74-76 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chang et al (US 4,421,902, cited on IDS dated 12/4/2003) in view of Carpenter et al (US 5,527,614).

The rejection is adequately set forth in paragraph 5 of Office action mailed on 12/27/2006 and is incorporated here by reference.

6. Claims 58, 60, 68, 69, 77, and 102-104 are rejected under 35 U.S.C. 103(a) as being unpatentable over Robinson (US 5,874,495, cited on IDS filed 10/11/2005) in view of Chang et al (US 4,421,902, cited on IDS dated 12/4/2003).

Robinson discloses a thickener that is a copolymer (abstract, col. 10, lines 15-62) comprising 15-60 wt % acrylic or methacrylic acid or mixtures thereof (col. 4, lines 1-11), 15-80 wt % C₂-C₁₂ α,β -ethylenically unsaturated monomer (col. 4, lines 12-42); and 1-30 wt % ethylenically unsaturated nonionic biphilic monomer such as tristyrilpoly(ethyleneoxy) methyl acrylate (col. 2, lines 41-67) with 10-40 ethyleneoxy groups (col. 3, lines 51-52). The thickener

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is used in aqueous slurries and colloidal dispersions of water-insoluble inorganic materials (col. 7, lines 2-3).

Robinson fails to disclose the use of its thickener in composition comprising the thickener copolymer and a pigment.

Chang et al discloses emulsion copolymers similar to those taught by Robinson and teaches that they are useful in pigment dispersions (col. 7, lines 35-36; col. 10, lines 12-36).

Given that Robinson teaches that its thickener is used in a plurality of applications which include a composition with water-insoluble inorganic materials and further given that Chang et al teaches that such thickeners are useful in pigment dispersions, it would have been obvious to one of ordinary skill in the art to utilize the thickener of Robin in a pigment dispersion, i.e., colorant composition, with a pigment.

With respect to claim 103, while Robinson does not explicitly disclose using a mixture of surfactant monomer, it is considered that it would have been obvious to one of ordinary skill in the art to utilize two ingredients which are used for the same purpose. Case law holds it is *prima facie* obvious to combine two ingredients, each of which is targeted by the prior art to be useful for the same purpose. *In re Lindner* 457 F.2d 506, 509, 173 USPQ 356, 359 (CCPA 1972).

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re*

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Goodman, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

7. Claims 58 and 103 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 21 of copending Application No. 11/319,840 (published as US 2006/0167172). Although the conflicting claims are not identical, they are not patentably distinct from each other because of the reasons below.

US appl. '840 claims a colorant composition comprising at least one pigment, water, and a copolymer surfactant, wherein the copolymer surfactant contains 10-80 wt % of at least one C₃-C₁₂ α,β-ethylenically unsaturated carboxylic acid or anhydride, 10-80 wt % of at least one C₂-C₁₂ α,β-ethylenically unsaturated vinyl monomer, and 0.01-20 wt % of tristyrylphenylpoly(ethyleneoxy) methacrylate—wherein the Stormer low-shear viscosity of a paint containing the colorant composition is not substantially different than the Stormer low-sheary viscosity of a tint base used in the paint.

Given that US appl. '840 claims a colorant composition like presently claimed wherein the surfactant monomer of US appl. '840 is encompassed by the scope of the instantly claimed surfactant monomer, the instant claims are obvious over US appl. '840

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Response to Arguments

8. Applicant's arguments filed on 4/26/2007 and 6/4/2007 have been fully considered but they are not persuasive. Specifically, applicant argues (A) that the poly(oxyethylene) poly(carbonyloxyethylene) acrylate-based copolymer of Chang et al does not read on the presently claimed copolymer surfactant; (B) that Chang et al's surface copolymer is used as a thickener and therefore teaches away from a colorant composition which does not increase the Stormer low-shear viscosity of a tint base when added to the tint base; and (C) that applicant's data shows an unexpected difference in viscosity stabilization.

With respect to argument (A), the present claims do not exclude the carbonyloxyethylene moiety of Chang et al, which only state that the "surfactant monomer is an acrylic or methacrylic ester moiety joined to a hydrophobic moiety by a poly(ethyleneoxy) moiety." This language is open to other moieties, including the carbonyloxyethylene moiety of Chang et al.

With respect to argument (B), while Chang et al teaches that its surfactant copolymer is used as a thickener, Chang et al does not necessarily teach away from the presently claimed viscosity stabilization properties for several reasons. First, the present claims do not exclude all thickening given that the claims recite that the Stormer low-shear viscosity difference in the tint-base and paint prepared from tint-base and colorant composition is within $\pm 10\%$. Without knowing the significance of $\pm 10\%$, it is the examiner's position any thickening given by the surfactant copolymer of Chang et al falls within this range given that it discloses a surfactant copolymer like presently claimed. Second, the change in viscosity is highly dependent on the initial viscosity of the tint-base and the concentration of surfactant copolymer in the colorant composition, wherein by using the surfactant copolymer of Chang et al in a colorant composition

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would not necessarily increase the viscosity of an aqueous latex paint prepared from its colorant composition. Third, the final viscosity of the aqueous latex paint prepared from the colorant composition of Chang et al would be highly dependent on the amounts of pigment, water, and surfactant copolymer and therefore could be readily and easily controlled by one of ordinary skill in the art to obtain the desired viscosity of the final aqueous latex paint. Fourth, the surfactant copolymer of Chang et al is used as a thickener in a colorant composition, wherein this surfactant copolymer is used to thicken the colorant composition and not the latex paint which is prepared from the colorant composition.

With respect to argument (C), applicant's data has been considered, however, it is not a proper comparison to the closest prior art given that the comparative examples include HASE thickener TT-935 and not the poly(oxyethylene) poly(carbonyloxyethylene) acrylate-based copolymer of Chang et al.

Conclusion

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Vickey Ronesi whose telephone number is (571) 272-2701. The examiner can normally be reached on Monday - Friday, 8:30 a.m. - 5:00 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vasu Jagannathan can be reached on (571) 272-1119. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished

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applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

8/23/2007

Vickey Ronesi



/Vasu Jagannathan/
Supervisory Patent Examiner
Technology Center 1700